

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
10 February 2005 (10.02.2005)

PCT

(10) International Publication Number  
**WO 2005/012559 A1**

(51) International Patent Classification<sup>7</sup>: **C12Q 1/38**

(21) International Application Number:  
PCT/US2004/024034

(22) International Filing Date: 26 July 2004 (26.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/491,442 30 July 2003 (30.07.2003) US

(71) Applicant (for all designated States except US):  
**ROSETTA INPHARMATICS LLC** [US/US]; 12040  
115TH Avenue NE, Kirkland, WA 98034 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **PHILLIPS, John, W.**  
[US/US]; 12040 115TH Avenue NE, Kirkland, WA 98034  
(US).

(74) Agent: **HEBER, Sheldon, O.**; Merck & Co., Inc., 126  
East Lincoln Avenue, Rahway, NJ 07065-0907 (US).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report
- before the expiration of the time limit for amending the  
claims and to be republished in the event of receipt of  
amendments

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: METHODS OF USING A STEROL BIOSYNTHESIS PATHWAY REPORTER GENE TO SCREEN FOR ANTIFUN-  
GAL OR LIPID LOWERING COMPOUNDS

(57) Abstract: The present invention relates to methods of using nucleotide sequences from the promoter region of a *S. cerevisiae* gene YRM325W whose expression is an indicator of inhibition or modulation of the sterol biosynthesis pathway in *S. cerevisiae*. The invention envisions using a target polynucleotide sequence, wherein the target polynucleotide sequence is operably linked to the promoter region of the YMR325W gene, to screen chemical libraries and natural products for compounds which can be used either as antifungal agents for use against a variety of fungal pathogens, or as lipid lowering agents to treat hypercholesterolemia. The invention also envisions using the methods of the invention to assay the efficacy of and/or specificity of antifungal agents and lipid lowering agents, and/or to monitor the activity of the sterol biosynthesis pathway.

WO 2005/012559 A1